

## REMARKS

Enclosed is an executed Declaration by Steven E. Lentsch, Ph.D. The Declaration demonstrates that two compositions containing sodium bicarbonate and sodium carbonate and prepared as a result of solidification by extrusion according to the present invention are different from otherwise identical compositions prepared as a result of mixing, without extrusion. The Examiner's attention is directed to the enclosed Declaration by Steven E. Lentsch, Ph.D.

The invention is directed at a solid detergent composition provided in the form of a pellet or a block as a result of extrusion. The solid detergent composition comprises an effective amount of a cleaning agent to provide soil removal and an effective amount of a binding agent disbursed throughout the solid detergent composition to provide the detergent composition as a solid at a temperature of to about 100°F within about 20 minutes of extrusion. The cleaning agent comprises about 0.1 wt.% to about 20 wt.% of a surfactant based on the weight of the solid detergent composition, and about 1 wt.% to about 50 wt.% phosphonate, amino-carboxylate, or a mixture thereof based on the weight of the detergent composition. The binding agent comprises a result of mixing about 10 wt.% to about 80 wt.% alkali metal carbonate based on the weight of the detergent composition, about 1 wt.% to about 40 wt.% alkali metal bicarbonate based on the weight of the detergent composition, and a sufficient amount of water to react with the alkali metal carbonate and the alkali metal bicarbonate to provide solidification.

The invention is additionally directed to a method for solidifying a detergent composition. The method includes steps of mixing an effective amount of a cleaning agent to provide soil removable and an effective amount of a binding agent to solidify the detergent composition to form a mixture, extruding the mixture, and hardening the mixture to form the solid detergent composition in the form of a pellet or a block, wherein the hardening comprises a result of solidification by the binding agent, wherein the solid detergent composition has a melting temperature greater than 100°F within about 20 minutes of extruding the mixture.

The only rejection in the outstanding Office Action is a rejection of claims 1-4, 6, 10, 14-17, 20, and 28 under 35 U.S.C. §103(a) over U.S. Patent No. 5,576,282 to *Miracle et al.* This rejection is traversed.

*Miracle et al.* fail to disclose or suggest a solid detergent composition or a method for solidifying a detergent composition to provide an extruded solid in the form of a pellet or block as a result of solidification by a binding agent comprising about 10 wt.% to about 80 wt.% alkali

metal carbonate based on the weight of the detergent composition, about 1 wt.% to about 40 wt.% alkali metal bicarbonate based on the weight of the detergent composition, and a sufficient amount of water to react with the alkali metal carbonate and the alkali metal bicarbonate to provide solidification. *Miracle et al.* are not concerned with solidification to provide an extruded pellet or block using a binding agent according to the present invention.

There is no disclosure by *Miracle et al.* of a composition provided in the form of a pellet or a block as a result of extrusion. The outstanding Office Action points to *Miracle et al.* at column 11, lines 19-46, for the disclosure of various physical forms of the composition described by *Miracle et al.* These physical forms include granular or powder, liquid, gel, paste, tablets, and bars. None of the physical forms identified by *Miracle et al.* include pellets or blocks produced as a result of extrusion according to the present invention.

It is submitted that there is a difference between solids such as granules, tablets, powders, and bars according to *Miracle et al.*, and solids provided in the form of a pellet or block are a result of extrusion according to the present invention. The powders and granules disclosed by *Miracle et al.* are merely aggregates of loose material. The tablets disclosed by *Miracle et al.* are a result of compressing aggregate or powder. Furthermore, the bars disclosed by *Miracle et al.* are a result of the use of a waxy solid to hold other solid components of the composition together. For example, see Example VII of *Miracle et al.* that relies upon the presence of 30 wt.% C<sub>12</sub> linear alkyl benzene sulfonate and 2 wt.% coconut monoethanolamide as waxy solids that hold the composition together.

In contrast to *Miracle et al.*, the present invention utilizes a binding agent comprising 10 wt.% to about 80 wt.% alkali metal carbonate based on the weight of the detergent composition, about 1 wt.% to about 40 wt.% alkali metal bicarbonate based on the weight of the detergent composition, and a sufficient amount of water to react with the alkali metal carbonate and alkali metal bicarbonate to provide solidification of the solid detergent composition as a result of extruding to provide a solid detergent composition in the form of a pellet or a block. Clearly, *Miracle et al.* fail to disclose or suggest using a binding agent according to the present invention to provide a solid detergent composition.

Although *Miracle et al.* include some disclosure of the formation of a "laundry bar" there is no disclosure or suggestion by *Miracle et al.* that the laundry bar can be provided as a result of solidification using the binding agent according to the present invention.

It is recognized that *Miracle et al.* disclose various builders to be used as builders and chelants. *Miracle et al.*, however, do not disclose or suggest the use of a combination of alkali metal carbonate, alkali metal bicarbonate, and water to react with the alkali metal carbonate and alkali metal bicarbonate to provide solidification. The disclosure of carbonate and bicarbonate by *Miracle et al.* is not a disclosure that these components can be used for solidification. *Miracle et al.* fail to disclose how carbonate and bicarbonate can be used to provide solidification. In contrast, it is the inventors of the above-identified patent application who describe on pages 20 and 21 how alkali metal carbonate, alkali metal bicarbonate, and water can be used to provide solidification of a detergent composition. Clearly, the ingredients disclosed by *Miracle et al.* are not being used for the same purpose as provided by the presently claimed invention.

The statement in the outstanding Office Action that the "compositions derived from such a process would appear to be the same as those motivated by the reference" is incorrect. See the Office Action bridging pages 4 and 5.

Hardening or solidification according to the present invention is a result of the presence of the binding agent and it is not simply allowing a composition to dry. There is clearly a technical difference between a powder or granular composition that results from allowing a composition to dry, and a hardened and solidified composition that results from the use of a binding agent and extrusion according to the present invention. The use of a binding agent according to the present invention to provide for hardening by solidification is clearly discussed in the present specification at pages 20 and 21.

Furthermore, the Examiner's attention is directed to Declaration by Steven E. Lentsch, Ph.D. The Declaration demonstrates that, for the compositions tested, the compositions prepared as a result of solidification following extrusion are different from otherwise identical compositions but not solidified as a result of extrusion. The composition reported in Figure 1 contains 3.0 wt.% sodium bicarbonate and 56.0 wt.% sodium carbonate. The compositions reported in Figure 2 contain 12.0 wt.% sodium bicarbonate and 60.0 wt.% sodium carbonate. The compositions reported as "Extrusion" were solidified as a result of extrusion. The compositions reported as "Lab Batch" were allowed to solidify after mixing the components together in the laboratory (without extrusion).

In view of the Declaration of Steven E. Lentsch, Ph.D., it is submitted that that contention is the outstanding Office Action that a composition resulting from extrusion is necessarily identical to a composition dried out of aqueous slurry. It is incorrect.

In view of the above comments, it is clear that *Miracle et al.* are not concerned with providing a detergent composition provided as an extruded solid in the form of a pellet or a block as a result of solidification by a binding agent wherein the binding agent comprises about 10 wt.% to about 80 wt.% alkali metal carbonate based on the weight of the detergent composition, about 1 wt.% to about 40 wt.% alkali metal bicarbonate based on the weight of the detergent composition, and a sufficient amount of water to react with the alkali metal carbonate and the alkali metal bicarbonate to cause solidification. One having ordinary skill in the art would recognize that *Miracle et al.* fail to suggest such a composition, and one having ordinary skill in the art would recognize that one would not inherently achieve such a composition from the disclosure of *Miracle et al.*

In view of the above comments, withdrawal of the rejection over *Miracle et al.* is requested.

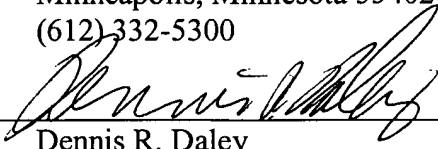
It is believed that this application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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